CHAPTER 4

VALUATION OF PERSONAL PROPERTY

VALUATION OF PERSONAL PROPERTY

The personal property valuation and assessment system in Arizona is based on the concept of “Full Cash Value." If no statutory method is prescribed, full cash value is synonymous with market value, which means the estimate of value that is derived annually by using standard appraisal methods and techniques.

Identifying the correct level of trade is critical to the valuation of personal property. Three distinct levels of trade are generally recognized: manufacturing, wholesale and retail. Personal property should be valued at the level of trade at which it is found. If a manufacturer leases products directly to consumers, the correct valuation of all products leased by the manufacturer is at the retail sales price, not the manufacturer's cost to produce the product.

There is not an active resale market for many kinds of personal property, except for liquidation sales. Prices paid at liquidation sales are not an adequate indicator of market value. Under these circumstances, it is appropriate to consider the replacement cost of an item of property, not the price for which it could be sold.

The cost approach is used to value most items of personal property. When utilizing the cost approach for personal property valuation, the current replacement cost new less depreciation (RCNLD) must be obtained. For most types of personal property, the total acquisition cost is factored to adjust it to the current replacement cost new (RCN). The factor applied is derived by relating the current trend of personal property costs to the total acquisition costs. The current RCN is then depreciated to reflect the age of the item of property. The resulting value is known as the replacement cost new less depreciation (RCNLD). Depreciation is defined later in this chapter.

Acquisition Cost. The starting point in the valuation of personal property is the acquisition cost. The cost of acquiring the personal property includes the actual cost of the item of property, the cost of transporting the personal property to its present site, the cost of installing the item of personal property, plus any sales or use tax paid on that property. The installation cost includes any electrical, plumbing or related work necessary to make the equipment functional. If any structural support or foundation is required for the installation of a specific item of equipment, that cost should be reported as a part of the acquisition cost. These costs are reported on either of the personal property statements by acquisition year (see Chapter 3).

Any special foundations, wiring, plumbing or related costs included in the structure in anticipation of acquiring the equipment should be included in the value of the structure, not in the cost of the equipment. When the equipment is subsequently installed, no adjustment is required for those items already included in the value of the structure.

Trending for Price Change. Acquisition costs for most items of personal property are adjusted, or trended, to reflect changes in the current replacement costs of those items. Changes in acquisition costs for items of personal property are measured from the year of acquisition to the current year. Cost data is provided in a Comparative Cost Index, published by Marshall and Swift L.P. This index is used by the Department to prepare the valuation factors that are provided in the "Personal Property Valuation Tables" section of Chapter 10. To illustrate the concept of trending, consider machine shop equipment originally acquired four years ago for $10,000. Assume that the cost index provides a multiplier of 1.146 for four-year old equipment. When applied to the acquisition cost, the current RCN is $11,460 ($10,000 x 1.146). Stated another way, the same property would cost $11,460 today.

Life Years. Each category of personal property items have specific expected lives associated with them. Expected lives are expressed as the number of years that the items of personal property in each category are typically retained for use with normal maintenance. The expected lives, or "Life Years," are identified in the Valuation Table Index in Chapter 10. They have been established, for the most part, by the Internal Revenue Service or through special studies.

The life years recommended in Chapter 10 are generally applicable to personal property in an industry grouping as a whole. There may be occasions where special studies, conducted on property in a more restricted segment of the industry, support either longer or shorter lives. Those studies should be considered if they properly reflect an industry-wide application of the longer or shorter life for the particular item of property.

The recommended life years in Chapter 10 do not apply in situations where there has been excessive use of the equipment. Refer to the section entitled "Adjustments for Excessive Depreciation" below for a discussion of valuation adjustments that are based on uses of personal property equipment that differ from the norm.

Depreciation. Depreciation of personal property is defined as the loss in value caused by normal use of an item of property over its expected useful life. The value of an item after depreciation has been accounted for is expressed as "percent good." Depreciation can be expressed as the loss of value at any given age, or as one hundred percent minus the percent good. For example, if an item of personal property is regarded as sixty percent good, it has incurred forty percent depreciation.

Valuation Factors. The valuation factors provided in Chapter 10 simplify the calculation of the RCNLD for personal property items. Without the use of valuation factors, this calculation is a two-step process. The first step is a determination of the current RCN by factoring the acquisition cost of the personal property item to the current tax year. The second step is a determination of the current RCNLD by depreciating the RCN for the age of the property. This dual calculation of the RCNLD is reduced to a single calculation when a valuation factor, or "composite factor" is used.

As an example, consider a three-year old item of property with an eight-year life that has appreciated by eight percent since acquisition. The current RCN is one-hundred-eight percent of acquisition cost. Assume that the item is seventy-five percent good. The item has a current RCNLD of eighty-one percent of acquisition cost (108 % x 75 % = 81 %).

Note that the resulting current RCNLD factor includes both appreciation and depreciation components.

Original acquisition cost		=	$ 1,000
Current year's RCN	$1,000 x 108 %	=	$ 1,080
Current year's RCNLD	$1,080 x 75 %	=	$ 810
RCNLD (as a percentage of acquisition cost)	$ 810 ÷ $1,000	=	81 %

MINIMUM VALUE

The valuation tables in Chapter 10 list minimum valuation factors. A minimum valuation factor indicates that if the item of property is still in use after the number of expected life years, it maintains a minimum value in use until it is scrapped or discarded. For personal property in Legal Class One, Subclasses (8), (9), (10), and (13), or in Legal Class Two, Subclass 2(P)(a), (b), (c), (d), and (e), the minimum valuation factor will be reduced by 2.5 percent each year. Minimum valuation factors will not be reduced below 2.5 percent, pursuant to A.R.S. § 42-13055. When an item of personal property is no longer usable, or is being cannibalized for spare parts, its value should be determined by the Assessor based on the best available information. When the item of personal property has been disposed of, it should be reported on a personal property statement as a deletion from the list of taxable personal property.

ADJUSTMENTS FOR EXCESSIVE DEPRECIATION

In the valuation process, items of personal property are depreciated over their expected useful lives. The causes of depreciation are generally categorized into three groups; physical deterioration, functional obsolescence, and economic (external) obsolescence. Changes in supply and demand, interest rates, and technological advancements all contribute to conditions that affect depreciation.

In general, the use of personal property items for their intended purpose contributes to the loss in value of those items. Therefore, the personal property valuation system recognizes typical physical deterioration and typical conditions of obsolescence over the expected useful lives of personal property items.

County Assessors may also need to consider valuation adjustments for personal property items to recognize any excessive depreciation. These are conditions of depreciation beyond normal conditions of deterioration or obsolescence.

If the actual depreciation of an item of personal property has been greater (or less) than normal, the valuation factor used to calculate the current RCNLD should be modified to reflect the abnormal condition of the property. Excessive losses in value may result from physical deterioration, functional obsolescence, or economic (external) obsolescence.

Excessive physical depreciation may be present in an item of personal property that is being used for two shifts, seven days per week, when typical use of that item is one shift, five days per week. In such cases, when the use exceeds that which is typical for the item of property, an adjustment for excessive loss in value may be required. A valuation adjustment for excessive physical deterioration may apply to a storage tank used to contain a chemical that is more corrosive than average. Utilization in this manner would limit the tank's expected useful life. In this circumstance, it may be appropriate for the County Assessor to adjust the value to recognize the increased rate of depreciation.

The obsolescence category includes those conditions that relate to economic (external) factors and functional factors, which usually shorten the expected life of a particular item of property. Typically, obsolescence relates to a single item of personal property or a certain group of items. Obsolescence is applied by determining the expected remaining life based on the current condition of the property, identifying the acquisition cost and year of acquisition, and then adjusting the remaining life to reflect the current condition.

Excessive functional obsolescence may also be a consideration where rapid technological changes affect the rate at which conditions of obsolescence apply. Certain types of personal property, especially in the electronics and computer industries, may be affected almost immediately by obsolescence to some extent, due to technological advancements. However, before the value of the personal property is adjusted for excessive physical, functional or economic obsolescence, the property owner must prove to the Assessor that the property has incurred a loss of value. The fact that a faster machine exists, or that external forces have affected a facility or its market doesn't necessarily mean that the value of the item of personal property itself has been negatively impacted.

As an example of functional obsolescence, assume that a business computer system was acquired with the expectation of producing complex word processing formats, spreadsheets, and high-speed mathematical data processing. After the computer was put into use, the owners discovered that the multi-tasking production requirements of the job exceeded the computer's production output capabilities. Expensive upgrades would improve the computer's ability to perform at the required level. However; the cost to cure the problem is approximately the same as the cost of a new, more technologically advanced machine. In this instance, the computer did not adequately perform the required task. Therefore, the computer is adversely affected by conditions of functional obsolescence.

Economic (external) obsolescence is a condition caused by factors external to the personal property items that have a negative effect on the value of those items. For example, this type of depreciation may apply to forms or jigs which do not have an alternative use and that are used to manufacture a specific product. When that product is no longer in demand or being manufactured, the valuation of the machinery may be adjusted for excessive economic obsolescence.

To further illustrate an adjustment for excessive depreciation, assume that a new item of personal property was purchased last year for $10,000, and had an expected life of ten years. However, the item now has an eight-year life expectancy due to heavy usage. Identify the $10,000 total acquisition cost for the year of purchase, and adjust the expected life from ten years to eight years. Future calculations of the RCNLD should reflect this shorter life (i.e., faster depreciation). In summary, the County Assessor may adjust for conditions of excessive depreciation. However, these adjustments should be fully documented in the Assessor's records.

ADDITIONAL STATUTORY DEPRECIATION

Arizona has adopted an additional depreciation schedule to be used to value specific classes of personal property. Pursuant to A.R.S. §§ 42-13054 and 42-13353, this additional statutory depreciation, sometimes incorrectly referred to as "accelerated" depreciation, applies **only** to eligible Legal Class One, Subclasses (8), (9), (10), and (13), and Legal Class Two, Subclass 2(P) personal property, and only for a four-year period. To qualify for this additional depreciation treatment, the above-referenced Legal Class One personal property must be initially assessed in Arizona in 1994 or thereafter, and the Legal Class Two, Subclass 2(P) personal property must be initially assessed in Arizona in 1995 or thereafter. Any personal property that has escaped taxation and that should have been initially assessed prior to the implementation of additional depreciation does not qualify for the application of this additional depreciation treatment.

Additional statutory depreciation is to be applied to the full cash value of the personal property using the Department's valuation schedule as follows:

1. In the first year assessment, the property will be valued at thirty-five percent of the scheduled depreciated value.

2. For the second year assessment, the property will be valued at fifty-one percent of the scheduled depreciated value.

3. For the third year assessment, the property will be valued at sixty-seven percent of the scheduled depreciated value.
4. For the fourth year assessment, the property will be valued at eighty-three percent of the scheduled depreciated value.
5. For the fifth and subsequent tax year's assessments, the property will be valued at one hundred percent of the scheduled depreciated value.
6. The additional depreciation prescribed above will not reduce the valuation below the minimum value prescribed by the Department for property in use.

The Department's valuation tables contain valuation factors both with and without the four-year additional statutory depreciation factors. The nonshaded rows represent the standard valuation factors that are used to calculate the full cash value of an asset. If the item of personal property qualifies for additional depreciation, the valuation factor in the shaded row is applied to calculate an adjusted full cash value. The shaded rows represent additional statutory depreciation, which is derived by multiplying the standard valuation factor by the additional depreciation amount. That additional statutory depreciation factor is then applied to the acquisition cost of the personal property to calculate the adjusted full cash value.

COMPREHENSIVE EXAMPLES

The examples shown on the following pages illustrate the proper use of the valuation information located in Chapter 10, and include samples of the Valuation Table Index, valuation tables, and valuation factors.

These sample valuation tables, and the corresponding valuation factors created for each example, are only for illustration. To better understand these examples, refer to the Valuation Table Index in Chapter 10 and compare them to the sample valuation tables provided in each example.

Example A. One-year old equipment with additional depreciation. One-year old personal computer equipment, acquired for $28,000, would have a current RCNLD of $4,900. The County Assessor classified this property as Legal Class 1, Subclass (10). Use the index in Chapter 10, and Sample Valuation Table 5 provided in this example.

STEP 1: In the Valuation Table Index , locate the entry for "Computers," noting the subgroup "Personal Computers and Related Peripheral Equipment." According to the index reference, personal computers are valued using Valuation Table 5, and are considered to have a four-year economic life.

STEP 2: For the purposes of this example, use the four-year life column of Sample Valuation Table 5 to locate the 17.5 percent additional statutory valuation factor forone-year old computer equipment (age 1). The additional statutory depreciation factor is used because the equipment is being initially assessed after 1994.

STEP 3: Multiply the $28,000 acquisition cost by the 17.5 percent valuation factor to calculate the RCNLD of $4,900. ($28,000 X 0.175 = $4,900).

SAMPLE VALUATION TABLES 2, 3, 5

		TABLE 2		TABLE 3		TABLE 5			
Year Acquired	**Age**	**5 Year Life**		**10 Year Life**		**2 Year Life**		**4 Year Life**	
		*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes
2003	1	55	55	92	92	30	30	50	50
*** 2003**	**1**	**19.3**		**32.2**		**10.5**		**17.5**	
2002	2	50	50	86	86	2.5	15	30	30
*** 2002**	**2**	**25.5**		**43.9**		**2.5**		**15.3**	
2001	3	30	30	78	78			20	20
* **2001**	**3**	**20.1**		**52.3**				**13.4**	
2000	4	20	20	70	70			2.5	10
*** 2000**	**4**	**16.6**		**58.1**				**2.5**	
1999	5	2.5	10	63	63				
1998	6			55	55				
1997	7			50	50				
1996	8			30	30				

*ADDITIONAL DEPRECIATION. Legal Class One, Subclasses (8), (9), (10), and (13) personal property initially assessed in Arizona in 1994 or later, and Legal Class Two, Subclasses 2(P)(a), (b), (c), (d), and (e) personal property initially assessed in Arizona in 1995 or later, receive additional statutory depreciation. The shaded rows reflect composite valuation factors which incorporate additional statutory depreciation.

Example B. Five-year old equipment. Five-year old medical equipment, purchased for $40,000, has a current RCNLD of $21,200. Use the index in Chapter 10 and Sample Valuation Table 1 provided in this example.

STEP 1: Under the "Medical" heading in the index, locate the "Medical Equipment" category. The index references Valuation Table 1 and provides a ten-year economic life for medical equipment.

STEP 2: Refer to Sample Valuation Table 1. Locate the year acquired for age 5 years, and the corresponding valuation factor from the 10 life years column.

STEP 3: Apply the 53 percent valuation factor to the medical equipment's acquisition cost of $40,000 to arrive at the RCNLD of $21,200. ($40,000 X 0.53 = $21,200).

SAMPLE VALUATION TABLE 1

		LIFE YEARS							
		8		9		10		11	
Year Acquired	Age	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes
2003	1	88	88	89	89	90	90	91	91
* 2003	1	30.8		31.2		31.5		31.9	
2002	2	76	76	79	79	81	81	83	83
* 2002	2	38.8		40.3		41.3		42.3	
2001	3	64	64	68	68	72	72	74	74
*2001	3	42.9		45.6		48.2		49.6	
2000	4	52	52	57	57	62	62	66	66
*2000	4	43.2		47.3		51.5		54.8	
1999	5	39	39	47	47	53	53	57	57
1998	6	26	26	35	35	42	42	48	48
1997	7	13	20	24	24	32	32	39	39
1996	8	2.5		12	20	22	22	29	29
1995	9			2.5		11	20	20	20
1994	10					2.5		6	20
1993	11							2.5	

* ADDITIONAL DEPRECIATION. Legal Class One, Subclasses (8), (9), (10), and (13) personal property initially assessed in Arizona in 1994 or later, and Legal Class Two, Subclasses 2(P)(a), (b), (c), (d), and (e) personal property initially assessed in Arizona in 1995 or later, receive additional statutory depreciation. The shaded rows reflect composite valuation factors which incorporate additional statutory depreciation.

Example C. Minimum value. Six-year old food vending equipment, acquired for $18,500, has a current RCNLD of $462.50. Use the index in Chapter 10 and Sample Valuation Table 7.

STEP 1: Using the index, locate "Food Vendors," a subgroup of the "Vending Equipment" category. Valuation Table 7 is referenced and a five-year life is provided for this type of equipment.

STEP 2: For this example, refer to Sample Valuation Table 7 to locate the corresponding valuation factor for age 6, and 5 life years. This example illustrates personal property that is still in use after its expected life of 5 years. Therefore, valuation of six-year old food vending equipment is based on a minimum valuation factor of 2.5 percent, according to the sample table, until it is scrapped or has been discarded.

STEP 3: Multiply the acquisition cost of $18,500 by the minimum valuation factor of 2.5 percent to calculate the RCNLD of $462.50. ($18,500 X 0.025 = $462.50).

SAMPLE VALUATION TABLE 7

Valuation Factors (Percent Good) Based on Straight Line Depreciation

		LIFE YEARS							
		4		5		6		7	
Year Acquired	Age	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes	*Class 1 & 2	All Other Classes
2003	**1**	75	75	80	80	83	83	86	86
***2003**	**1**	**26**		**28**		**29**		**30**	
2002	**2**	50	50	60	60	67	67	71	71
***2002**	**2**	**26**		**31**		**34**		**36**	
2001	**3**	25	25	40	40	50	50	57	57
***2001**	**3**	**17**		**27**		**34**		**38**	
2000	**4**	2.5	20	20	20	33	33	43	43
***2000**	**4**	**2.5**		**17**		**27**		**36**	
1999	5			2.5		17	20	29	29
1998	6					2.5		14	20
1997	7							2.5	

* ADDITIONAL DEPRECIATION. Legal Class One, Subclasses (8), (9), (10), and (13) personal property initially assessed in Arizona in 1994 or later, and Legal Class Two, Subclasses 2(P)(a), (b), (c), (d), and (e) personal property initially assessed in Arizona in 1995 or later, receive additional statutory depreciation. The shaded rows reflect composite valuation factors which incorporate additional statutory depreciation.

DETERMINING ASSESSED VALUE

Assessment Ratio. The assessment process for personal property includes an assessed value calculation which is accomplished by multiplying the full cash value by the assessment ratio for a specific type of property. Assessment ratios are defined by statute, and are associated with groups of property types called legal classes. Descriptions of the legal classifications established for property tax purposes, and the types of properties included in those legal classes, are provided in A.R.S. §§ 42-12001 through 42-12010. The assessment ratios that are assigned to each of those legal classifications are outlined in A.R.S. §§ 42-15001 through 42-15010.

Statutory Exempt Amount. A.R.S. § 42-11127 provides for an exemption from property taxation of up to a maximum amount of full cash value for each taxpayer's Legal Class One, Subclasses (8), (9), (10), (11), and (13) or Legal Class Two, Subclass 2(P)(a) and (b) personal property. In tax year 1997, the original maximum exempt amount was $50,000. The Department is required to adjust the maximum amount of the exemption for the following tax year based on the average annual percentage increase, if any, in the Gross Domestic Product (GDP) price deflator in the two most recent complete state fiscal years on or before December 31 each year. The table below demonstrates the recent history of the exempt amount from tax year 2000 to the present:

Tax Year	Exempt Amount
2000	$52,468
2001	$53,266
2002	$54,367
2003	$55,456
2004	$56,298
2005	$57,632
2006	$59,099

CLASSIFICATION

Application of Legal Classification. The classification of an item of personal property is based on its current use, not on its ownership. However, if identical items of personal property are put to different uses by different owners, each item must be classified by its own current use. For illustration purposes, consider two identical tractors. If one tractor is used by a farmer, it is classified under Legal Class Two, Subclass 2(P)(a) or (b) for its agricultural use. But if the other tractor is used by a contractor, it would be classified as Legal Class One, Subclass (13) for its commercial use. Pursuant to A.R.S. § 42-19005, this concept does not apply to short-term leased or rental equipment, which would be assessed in Legal Class One, Subclass (13).

Specific Properties in Legal Class Six. Although the majority of personal property is classified in Legal Classes One or Two, some specific properties are classified in Legal Class Six. These would include personal property in Noncommercial Historic Properties, Foreign Trade Zones, Military Reuse Zones, Enterprise Zones, Qualified Environmental Technology Manufacturing, Producing or Processing Facilities, personal property used on or after January 1, 1999 specifically and solely for "remediation of the environment" and personal property utilized in conjunction with qualified “Forest Health” program projects. The assessed valuation of Class Six property is five per cent of its full cash value, as applicable, pursuant to A.R.S. § 42-15006.